

IN THE CLAIMS

Please cancel claims 1-22 and add new claims 23-31 as follows:

1-22. Canceled

23. (New) A dry etching method comprising the steps of:

generating electromagnetic waves and a magnetic field in an etching treatment chamber under vacuum,

generating plasma including a first electronic temperature region and a second electric temperature region, and

etching a sample installed in said chamber.

24. (New) A dry etching method using a dry etching apparatus including a vacuum chamber, a sample stage for holding a sample to be etched, an antenna arranged in said vacuum chamber for injecting an electromagnetic wave with a predetermined frequency, and a power source connected to the antenna, comprising the steps of:

generating electromagnetic waves and a magnetic field in said chamber,

generating plasma including a first electronic temperature region and a second electric temperature region, and

etching the sample installed in said chamber.

25. (New) A dry etching method as claimed in claim 24,  
wherein,

a distance between said antenna and said sample is set at  
a value in the range from 30mm to 100 mm.

26. (New) A dry etching method as claimed in claim 24,  
further comprising the steps of:

supplying an etching gas including C and F into an  
etching treatment chamber under vacuum.

27. (New) A dry etching method as claimed in claim 26,  
further comprising the steps of:

generating F(fluorine radicals) and ions corresponding to  
CF<sub>2</sub> in said plasma, each amount of which is independent of  
each other, and

performing said etching.

28. (New) A dry etching method as claimed in claim 24,  
wherein,

said step of generating plasma is carried out by  
electron-cyclotron resonance (ECR).

29. (New) A dry etching method as claimed in claim 28,  
further comprising the steps of:

introducing a gas consisting of at least carbon and fluorine into said chamber,  
generating electromagnetic waves and a magnetic field in said chamber,  
generating plasma by electron-cyclotron resonance (ECR),  
determining a position of applying the ECR,  
generating F(fluorine radicals) and ions corresponding to CF<sub>2</sub> in said plasma, each amount of which is independent of each other, and  
performing said etching.

30. (New) A dry etching method as claimed in claim 29,  
further comprises the step of:

applying a magnetic field to said chamber to generate the plasma.

31. (New) A dry etching method as claimed in claim 30,  
further comprising the step of:

controlling a gradient of the magnetic field.